

What is claimed is:

1. A fuel injection valve comprising:

a valve section including of: a cylindrical moving iron core that reciprocates in axial direction in response to fuel injection signal; a valve element integrated with said moving iron core at one end and provided with a valve seat at the other end; and a plate provided with orifices that are opened and closed as said valve seat comes in contact with the orifices and parts therefrom; and

a solenoid section including of: a cylindrical stationary iron core disposed facing said moving iron core in axial direction; a cylindrical yoke disposed on the outer circumference of said moving iron core; a non-magnetic metal sleeve where said stationary iron core and said yoke are joined into one body by welding; a housing forming a magnetic loop with said stationary iron core, moving iron core and yoke; a coil that is disposed on the outer circumference of said stationary iron core and gives axial electromagnetic attraction to said moving iron core; and a compression spring to urge spring force that moves said valve element toward said plate;

wherein said moving iron core is provided with a radial recess of a predetermined width and a predetermined depth on the outer circumference thereof at a position facing a magnetic characteristic change portion produced in said yoke due to heat generated when said sleeve and said yoke are welded together.

2. The fuel injection valve according to claim 1, wherein said valve element of which one end is integrated with said moving iron core is made of a magnetic material.